Installation Manual

Nonlinear AV Workstation
Main Kit
AY-NE2000

Panasonic ®

CONTENTS

PREFACE

The AY-NE2000 Panasonic Nonlinear AV Workstation Main Kit is a combination of powerful hardware, flexible software and a custom human interface developed for professional post-production work. With the AY-NE2000 AV Workstation, nonlinear editing is a creative process that finishes your videos to high standards while maintaining production budgets.

OPERATING CONDITIONS

The AY-AS2000 (Ver.4.1 or later) application software is prerequisite.

FEATURES

Batch Digitizer
- VCR control for batch digitizing source bins for scene sorting
- Clip database includes in, out, reel, scene number, take number, comment, name
- Clip searching and sorting by keyword/read reel number from user bits option

Sequence Editor
- "Drag & Drop" scene placement — insert, replace, cover modes
- Audio follow video on/off edit mode — 3 layers of video tracks - video, key and title
- Separate "effects" track for dissolves, wipes, compression, etc.
- Over 250 different effects (inc. 3D DVE)
- Output of compatible EDL
  - CMX3600
  - CMX340
  - GVG
  - SONY (BVE9000)
  - Panasonic (AU-A950)

Audio Processing
- 4 layers of stereo audio tracks
- Equalizer, delay, mono (panpod), and reverb effect

Character Generator
- Including 41 true type fonts
- Automatic crawl or roll
- Automatic timing of title transitions

Paint Editor
- Retouch software, cut and paste, brush, stencil, airbrush, draw
- Graphic data file support

ZIP is the registered trademarks of IOMEGA Corporation, U.S.A.
Windows 95 is the registered trademarks of Microsoft Corporation.
Pentium is the registered trademarks of Intel Corporation.

- Do not expose the main unit and jog pad to rain or moisture, and do not try to operate the equipment in wet areas. Do not operate the main unit and jog pad if it becomes wet.
- Do not attempt to disassemble the main unit or jog pad. In order to prevent electric shock, do not remove screws or covers.
  There are no user-serviceable parts inside.
- Do take immediate action if ever the main unit or jog pad should become wet. Turn the power off and have the unit checked by an authorized service facility.
- Do not interrupt the Vent Hole on the front panel.
  The main unit will heat and it will cause the damage or a fire.
- Be sure to remove the plug by grasping the plug and not the cord itself.
- Do not initial the built-in hard disk.

- Use the main unit or jog pad in an environment where the temperature is within 32°F ~ 95°F (0°C ~ +35°C), and the relative humidity is within 10 ~ 90%.
- Handle the unit with care.
  Do not abuse the main unit or jog pad. Avoid striking, shaking, etc. It could be damaged by improper handling or storage.
- Do not use strong or abrasive detergents when cleaning the unit and jog pad.
  Do use a dry cloth to clean the unit when dirty.
  In case the dirt is hard to remove, use a mild detergent and wipe gently.
- The input power source is 120V AC 60 Hz.

■ FRONT PANEL
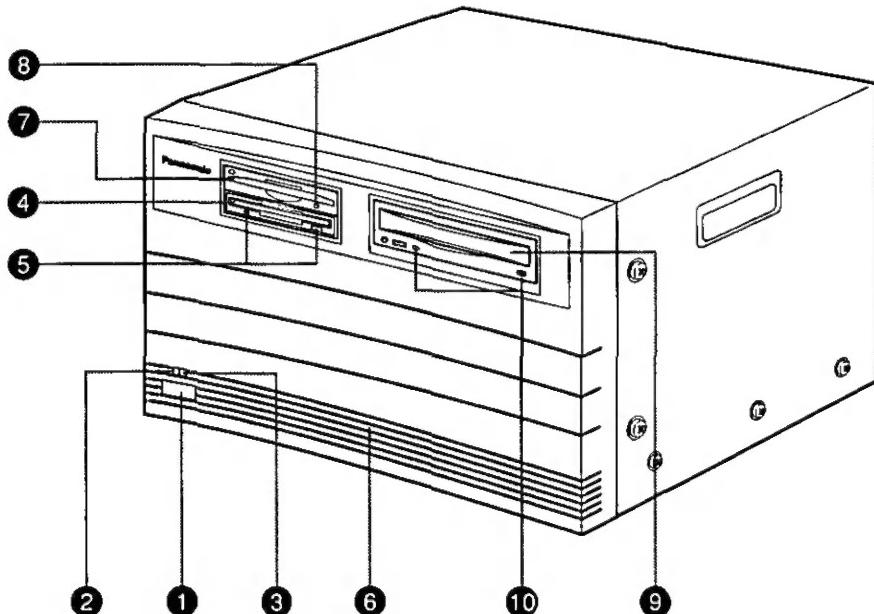
1. Power On/Off Switch

Turns the power of this unit on and off.

Notes:

1. Be sure to turn on the power of this unit after turning on the Hard Disk Box.
2. Do not turn off the power of this unit while the Nonlinear AV Workstation System software is running.

2. Power Indicator (RED)

Lights by turning on the power.

3. HDD Indicator (GREEN)

Lights up while the HDD operates.

4. 3.5" Floppy Disk Drive

5. Floppy Disk Indicator/Eject Button

Eject button ...Ejects the Floppy Disk.
Indicator ....Lights during an access of the floppy disk.

6. Front Panel

Caution: Do not interrupt the Vent Hole on this panel.

7. ZIP Drive

8. ZIP Indicator/Eject Button

Lights during an access of the ZIP.
Ejects the ZIP.

9. CD-ROM Drive

10. CD-ROM Indicator/Eject Button

Eject button ...Ejects the CD-ROM.
Indicator ....Lights during an access of the CD-ROM.

■ REAR PANEL
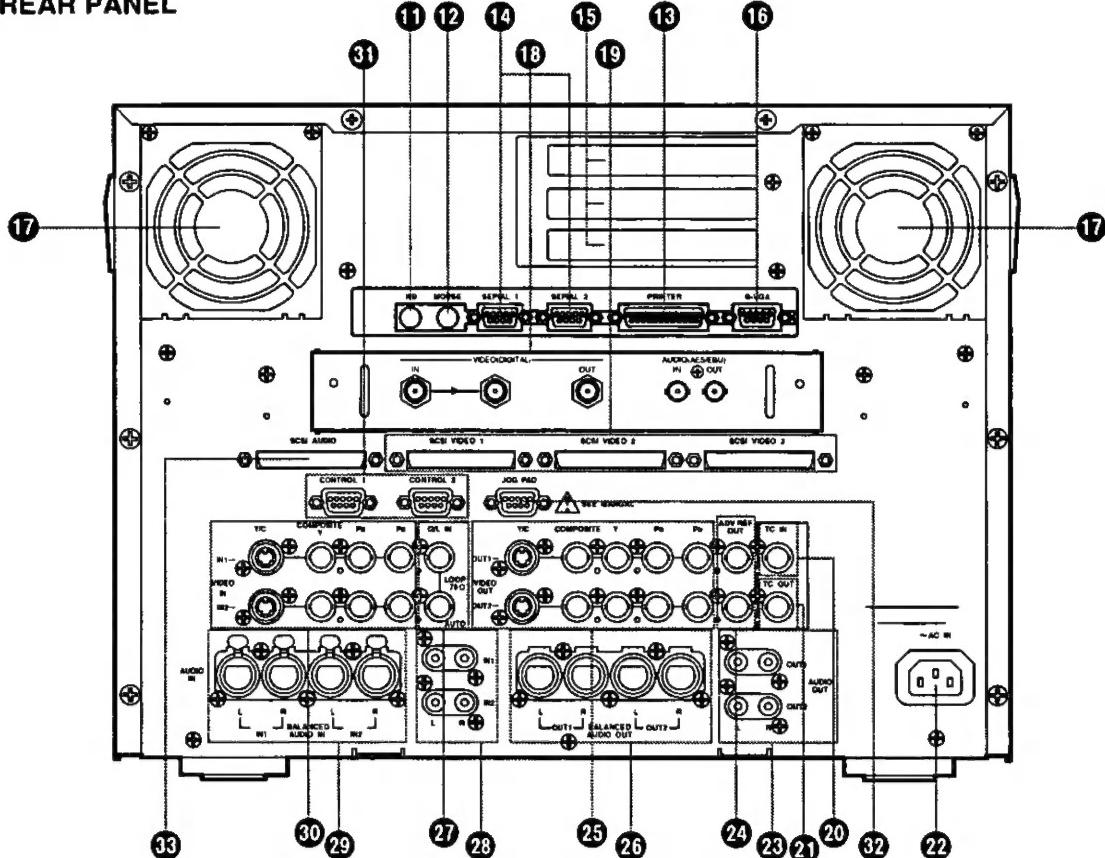
11. KEYBOARD Connector (KB)

Connects with the keyboard (locally purchase).
If the cable is too short to connect, use the Key Board Extension Cable (accessory).

12. MOUSE Connector (MOUSE)

Connects with the Mouse (locally purchase).
When the cable is too short to connect, use the Mouse Extension Cable (accessory).

13. PRINTER Connector (PRINTER)

Connects with the printer.

14. SERIAL1 / 2 Connectors (SERIAL 1/SERIAL 2)

Connects with equipment having RS-232C Interface Connectors.

15. PCI Slots

Refer to qualified service personnel.

16. S-VGA Connector (S-VGA)

Connects with the computer display.
The applicable display parameters are shown below.
Resolution: 1024 x 768
Horizontal Scanning Frequency: 48 kHz
Vertical Scanning Frequency: 60 Hz

17. Fan

Supplies steady forced air through intake and filter.

Note: After extensive use the fans need to be replaced periodically.

Operating Time	Operating Life
8-hour everyday use	6-year
12-hour everyday use	4-year
24-hour everyday use	2-year

18. SDI Board Slots

19. SCSI VIDEO Connectors (SCSI VIDEO 1-3)

Connects with the SCSI Video Connector of the Hard Disk Box AY-EB2000 or WJ-EB1000 via the optional SCSI Cable AY-CA68SR3 for AY-EB2000 or AY-CA50SR3 for WJ-EB1000.

20. TC (Time Code) IN Connector (TC IN)

Connects with a VCR having LTC time code signal output connector to improve editing accuracy.

21. TC (Time Code) OUT Connector (TC OUT)

Connects with a VCR having LTC time code signal input connector.

The signal supplied from this connector is not looped through.

22. AC Inlet

Connect the AC Power Cord (provided).

23. AUDIO OUT 1/2 Jacks
(AUDIO OUT OUT1, OUT2 L/R)

Supply the audio signals.

24. ADV-REF OUT Connector (ADV-REF OUT)

Supplies the Advance Reference Signal to the VCR having the time base corrector inside (or AUX video source).

25. Video Output Connectors
(VIDEO OUT1/OUT2 Y/C, COMPOSITE, Y, P$_B$, P$_R$)

Supplies the video signal to the monitor or VCR.

26. AUDIO OUT 1/2 Connectors
(BALANCED AUDIO OUT, OUT1/OUT2)

Supply the audio signals.

27. G/L IN / AUTO Connectors (G/L, IN/AUTO)

The gen-lock signal is supplied to these connectors (Be sure to terminate the video signal output from these connectors).

By connecting with the G/L AUTO Connector, the video signal is automatically unterminated.

Caution:

If a gen-lock signal is supplied to the G/L connector during playback or recording, it may cause the video to roll or cause other system malfunction.

Stop the playback or recording, then make a connection to the G/L connector again.

28. AUDIO IN 1/2 Jacks (IN1, IN2 L/R) (Unbalanced)

Accepts the audio signal.

The audio signal supplied to these jacks can be saved in the Hard Disk Box.

When the audio signal is supplied to the L side only, a monaural audio signal is made.

29. AUDIO IN 1/2 Connectors
(BALANCED AUDIO IN IN1 L/R, IN2 L/R)

Accepts the audio signal.

The audio signal supplied to these connectors can be saved in the Hard Disk Box.

30. Video 1/2 Input Connectors
(VIDEO IN1/IN2 Y/C, COMPOSITE, Y, P$_B$, P$_R$)

Accepts the video signals to be saved in the Hard Disk Box.

Select the connector, either Composite, Y/C or Component, according to the type of video signal.

The selection of either Video 1/Video 2 is available on the PC monitor screen.

31. CONTROL 1/2 Connectors
(CONTROL 1/CONTROL 2) (9-pin)

Supplies the control signal (for the recording or play back mode) to equipment having an RS-422 Interface Connector.

Be sure to supply the video signal of the VCR connected with CONTROL 1 to VIDEO IN 1, and likewise with the VCR connected to CONTROL 2.

32. JOGPAD Connector (JOGPAD)

Connects with the Jogpad (provided).

33. SCSI AUDIO Connector (SCSI AUDIO)

Supplies the audio signal to the SCSI Audio Connector of the optional Hard Disk Box via the optional SCSI Cable AY-CA68SR3 for AY-EB2000 or AY-CA50SR3 for WJ-EB1000.

■ JOG PAD
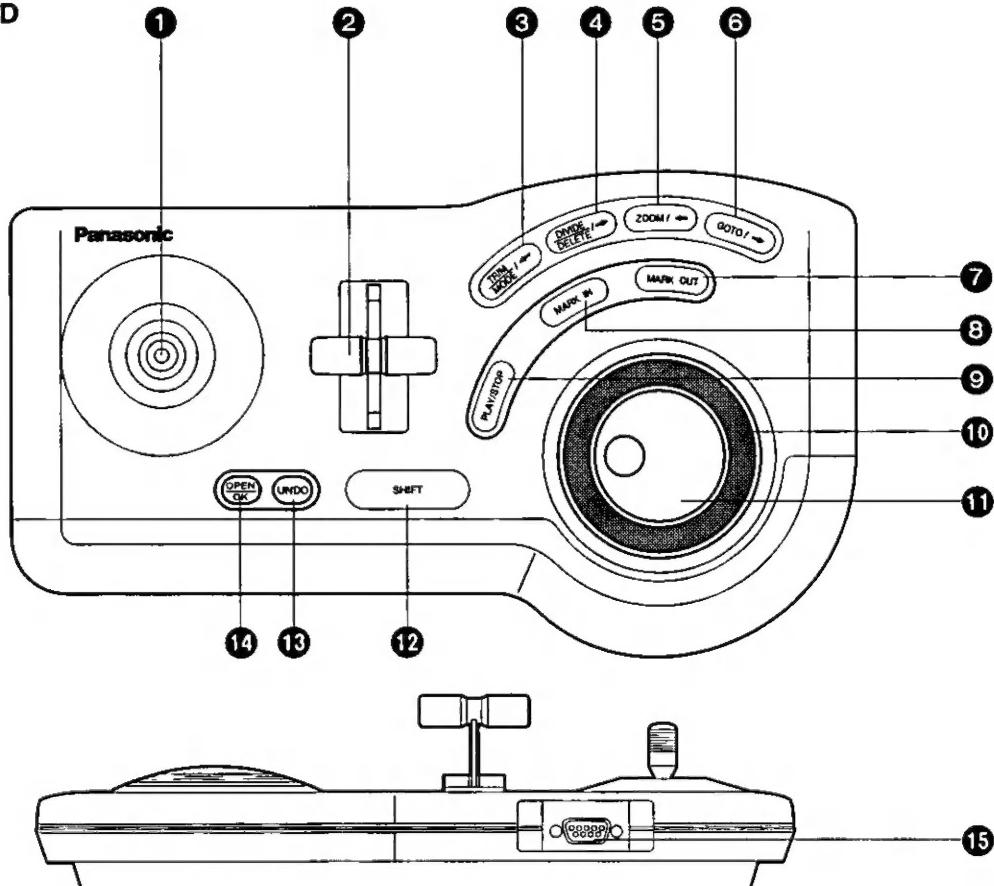
1. Positioner
Moves the selection cursor (when selection is confirmed).

2. Wipe Lever
Controls Wipe, Key Size, and Audio Level.

3. TRIM MODE / ◄—
Switches edit modes (Insert - Replace - Cover)
(SHIFT + TRIM/MODE) Turns Trim mode On/Off. (during transition)

4. DIVIDE DELETE / —►
Deletes a clip.
(SHIFT + DIVIDE / DELETE) Divides a clip.

5. ZOOM / ◄—
Zooms in the time line.
(SHIFT + ZOOM) Zooms out the time line.

6. GOTO / —►
Jumps to the starting or editing mark.
(SHIFT + GOTO) Jumps to the beginning or end of a sequence.

7. MARK OUT
Sets or cancels the ending mark.
(SHIFT + MARK OUT) Selects the grip of the OUT point.

8. MARK IN

Sets or cancels the starting mark.
(SHIFT + MARK IN)   Selects the grip of the IN point.

9. PLAY/STOP

Plays back or stops.
(SHIFT + PLAY /STOP)   Plays back between the starting and ending marks.

10. Shuttle Ring

Plays back video and audio forward (clockwise) or in reverse (counterclockwise) with variable speed.

11. Jog Dial

Plays back video and audio forward (clockwise) or in reverse (counterclockwise) frame by frame.

12. SHIFT

Switches button functions.

13. UNDO

Cancels the immediately previous operation.

14. $\frac{OPEN}{OK}$

Opens the selected panel or selects a panel and closes the previous panel.

15. Jog Pad Connector

Connects with the Main Unit by using the Jog Pad Cable (accessory).

These connections should be made by qualified service personnel or system installers.

■ Cable Information

Necessary cables for this system are shown below.

SCSI Cable (AY-CA68SR3/AY-CA50SR3) Connects with the HDD-BOX.

Coaxial Cable (with BNC Connector) Connects with the VCR or Monitor.

2-conductor shielded cable (with XLR-3-12C Connector) Connects with the powered speaker), cassette tape recorder, CD player, VCR.

S-VHS cable connects with the S-VHS VCR.

Cable	Use
SCSI Cable (AY-CA68SR3) **(AY-CA50SR3)**	HDD-BOX Connection
Coaxial Cable With BNC Connector	VCR (Video)/Monitor Connection
2-conductor shielded Cable With XLR-3-12C Connector	VCR (Audio) Connection
RCA Pin-plug Cable **RCA W Pin-plug Cable**	Power speaker Connection Cassette Tape Recorder/CD Player/S-VHS VCR (Audio) Connection
S-VIDEO Cable	S-VHS VCR Connection
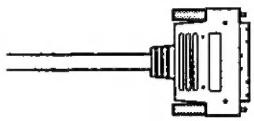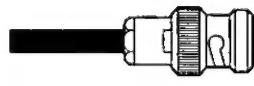
Coaxial Cable / BNC Connector

Coaxial Cable

Soldering

Inner BNC Connector

3 mm
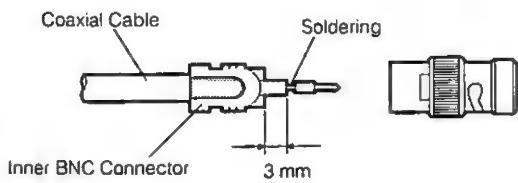
RCA Pin-plug

Connect single-conductor shielded wire as shown below.

Hot

Ground
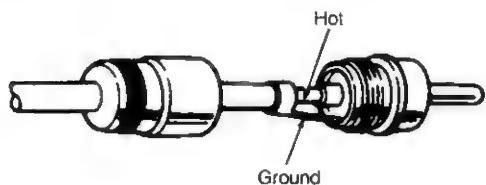
Interconnection of BNC Coaxial Cable

BNC Connector

BNC Connector

BNC Interconnector
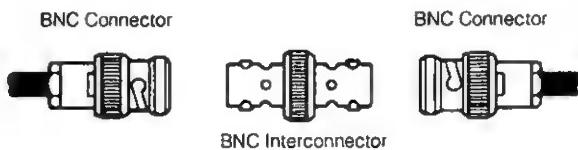
XLR-3-12C Connector

Connect the 2-conductor shielded wire as shown below.

Screw

Washer

2

1

3

2 — (Hot)

3 — (Cold)

1 — (Common)

3-pin XL-type
male connector
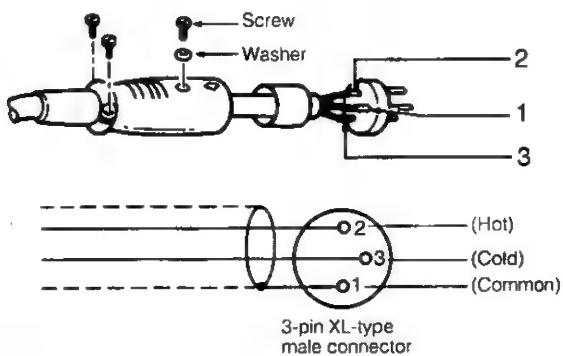
The following system connections should be made by qualified service personnel or system installers.

■ HDD-BOX Connection

1. HDD Installation to HDD-BOX
Refer to the Instruction Manual of the AY-EB2000 or WJ-EB1000 Hard Disk Box Installation instructions.

2. Connection from HDD-BOX to the Unit (AY-EB2000 or WJ-EB1000)
To connect HDD-BOX to the Unit, the optional SCSI cable AY-CA68SR3 for AY-EB2000 or AY-CA50SR3 for WJ-EB1000 is necessary.

Caution:

1. **For single HDD-BOX connection to the Unit (AY-EB2000 or WJ-EB1000)**
   Confirm that the HDD-BOX is set to "Terminated".

2. **For plural HDD-BOXes connection to the Unit (AY-EB2000 or WJ-EB1000)**
   Confirm that the first HDD-BOX (the farthest HDD-BOX from the Unit) is set to "Terminated".
   Also confirm that the other HDD-box(es) between the first HDD-BOX (Terminated) and the Unit are set to "Unterminated".

First HDD-BOX
SCSI ID = 6
Terminated

Second HDD-BOX
SCSI ID = 5
Unterminated

nx HDD-BOX
SCSI ID =
4, 3, ..., 0
Unterminated

SCSI Cable

SCSI AUDIO OUT
SCSI VIDEO1 OUT
SCSI VIDEO2 OUT
SCSI VIDEO3 OUT

SCSI VIDEO3 IN
SCSI VIDEO2 IN
SCSI VIDEO1 IN
SCSI AUDIO IN

SCSI Cable

SCSI AUDIO
SCSI VIDEO 1
SCSI VIDEO 2
SCSI VIDEO 3

[System example with AY-EB2000]
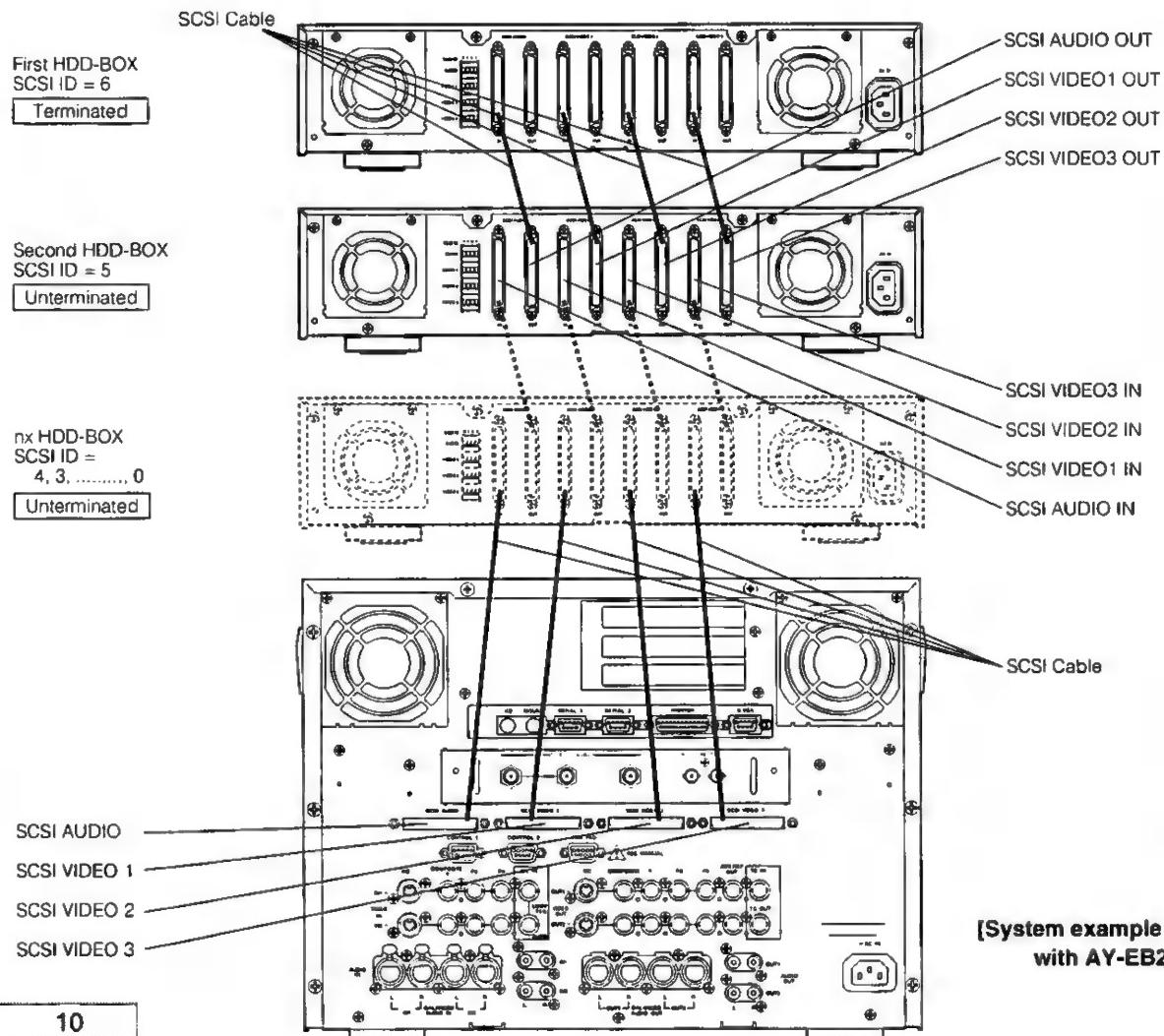
■ Key Board, Mouse and Jog Pad Connections

● Key Board and Mouse

Connect the KEY BOARD Connector of this unit to the Key Board.

Connect the MOUSE Connector of this unit to the Mouse.

Use the Key Board Extension Cable/Mouse Extension Cable (accessory) for the extension.

Key Board
Extension Cable
(accessory)

Mouse
Extension Cable
(accessory)

Control Unit

Key Board

Mouse
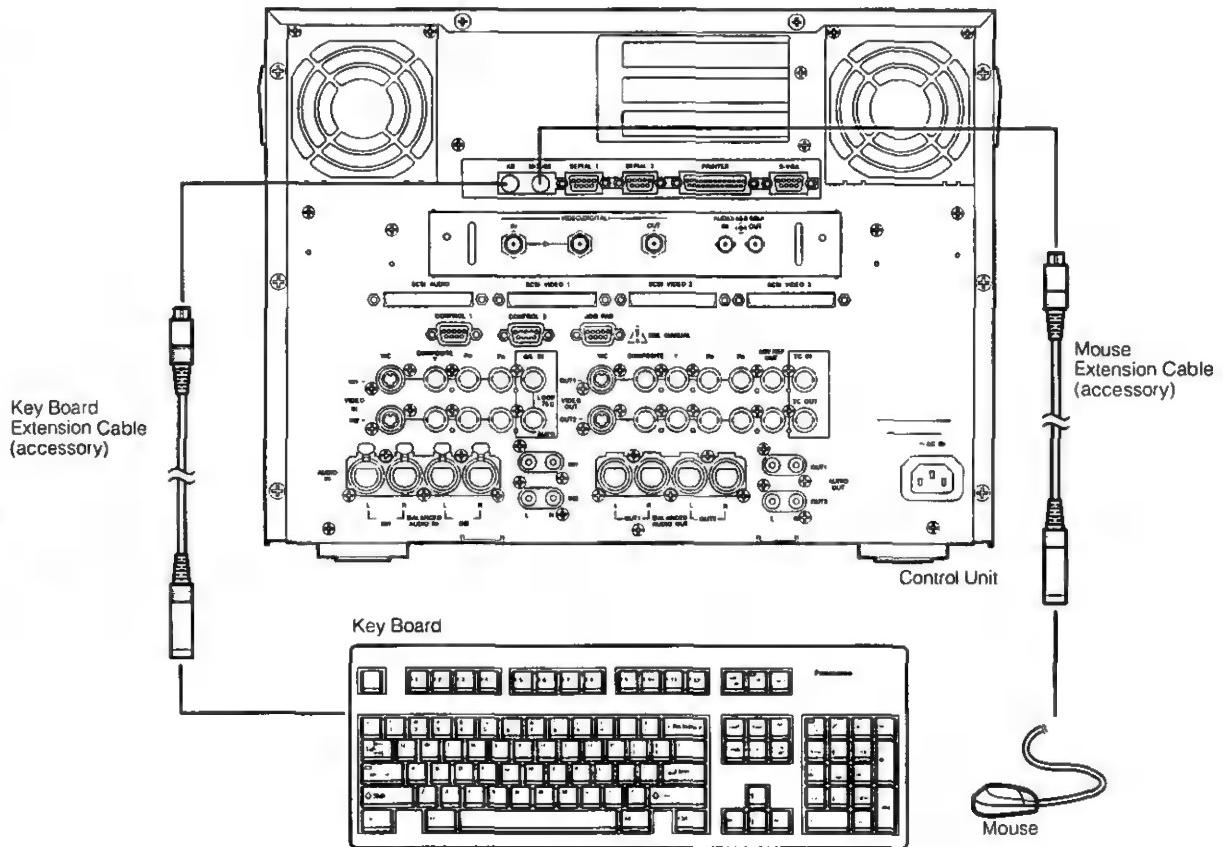
● Jog Pad Connection

Connect the JOGPAD Connector of this unit to the Jog Pad.
After connecting, tighten the screws on the Jog Pad Cable (provided).

Tighten these screws after the connection.

Control Unit

Jog Pad Cable (accessory)

Jog Pad
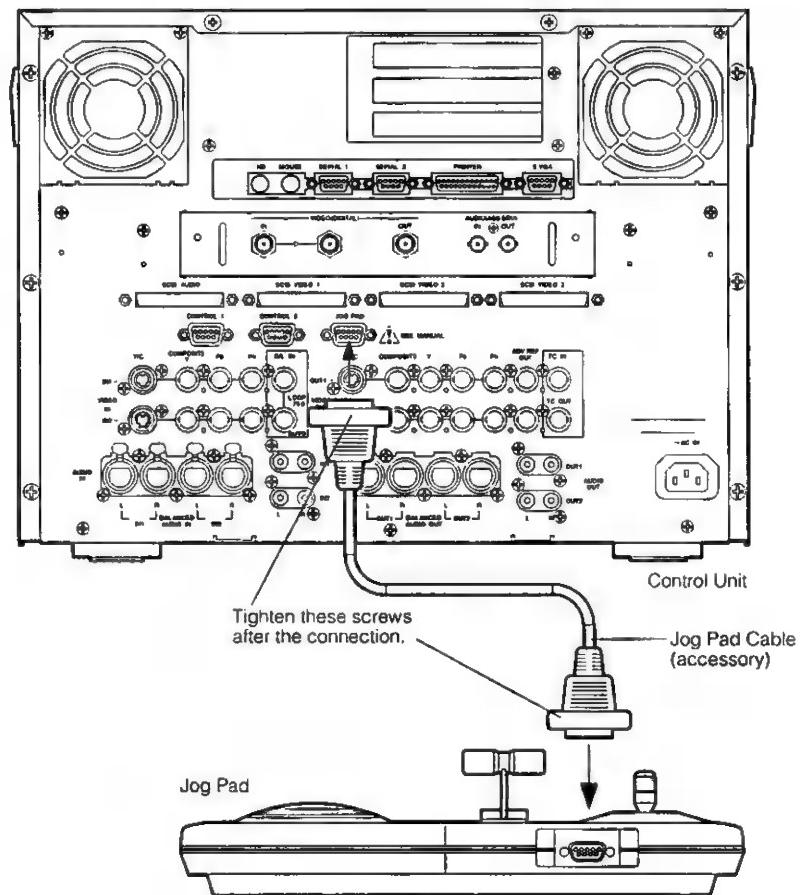
■ Monitor Connection

● Computer Display Connection

Connect the S-VGA Connector of this unit with the computer display.
The usable computer display is shown in the following.

Resolution   1024 x 768 dot
Horizontal Scanning Frequency   48 kHz
Vertical Scanning Frequency   60 Hz

Cable with 15-pin Connector

S-VGA
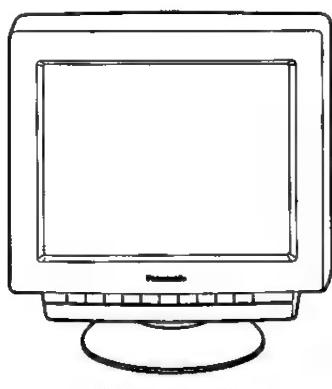
Computer Display
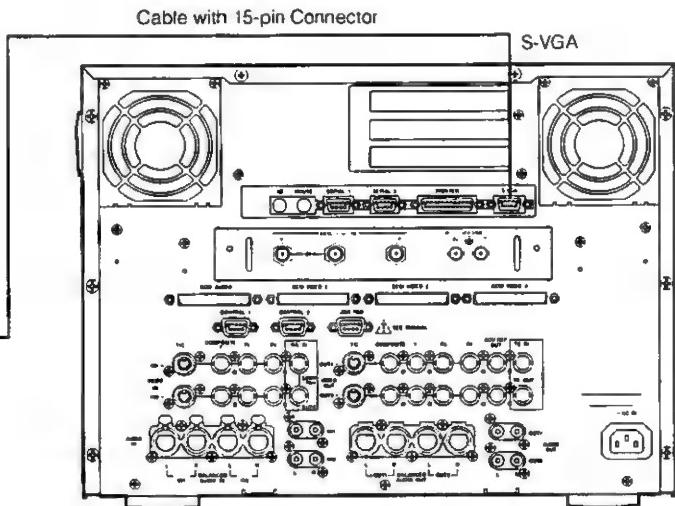
● VIDEO Monitor Connection

Connect the COMPOSITE Connector of this unit with the video monitor.
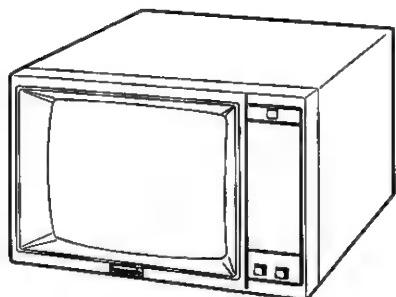
VIDEO OUT (COMPOSITE)

Coaxial Cable with BNC Connector
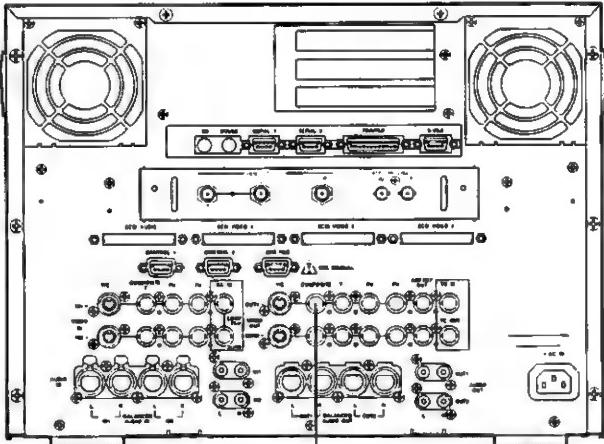
■ VCR Connection

● DVCPRO VCR

2-conductor Shielded Cable
(with XLR-3-12C Connector)

Coaxial Cable
(with BNC Connector)

ADV REF Output

AUDIO OUT (AES/EBU)

VIDEO OUT (PR)

VIDEO OUT (PB)

VIDEO OUT (Y)

VIDEO OUT (DIGITAL)

AUDIO OUT (R)

AUDIO OUT (L)

TC (LTC) Output

DVCPRO VCR

RS-422

TC (LTC) Input

AUDIO IN (L)

AUDIO IN (R)

VIDEO IN (Y)

VIDEO IN (PB)

VIDEO IN (PR)

VIDEO IN (DIGITAL)

AUDIO IN (AES/EBU)

<If necessary>

Signal Generator

Coaxial Cable
(with BNC Connector)

2-conductor Shielded Cable
(with XLR-3-12C Connector)

● S-VHS VCR

RCA Pin-plug Cable

AUDIO OUT (R)

AUDIO OUT (L)

S-Video Cable

VIDEO OUT (Y/C)

S-VHS VCR

VIDEO IN (Y/C)

AUDIO IN (L)

S-Video Cable

AUDIO IN (R)

RCA Pin-plug Cable

■ Powered Speaker, Cassette Tape Recorder or CD Player Connection

Powered Speakers

RCA Pin-plug Cable

AUDIO OUT 1 (R)

AUDIO OUT 1 (L)

Cassette Player

CD Player

AUDIO OUT 2

AUDIO IN 1

AUDIO IN 2

RCA Double Pin-plug Cable
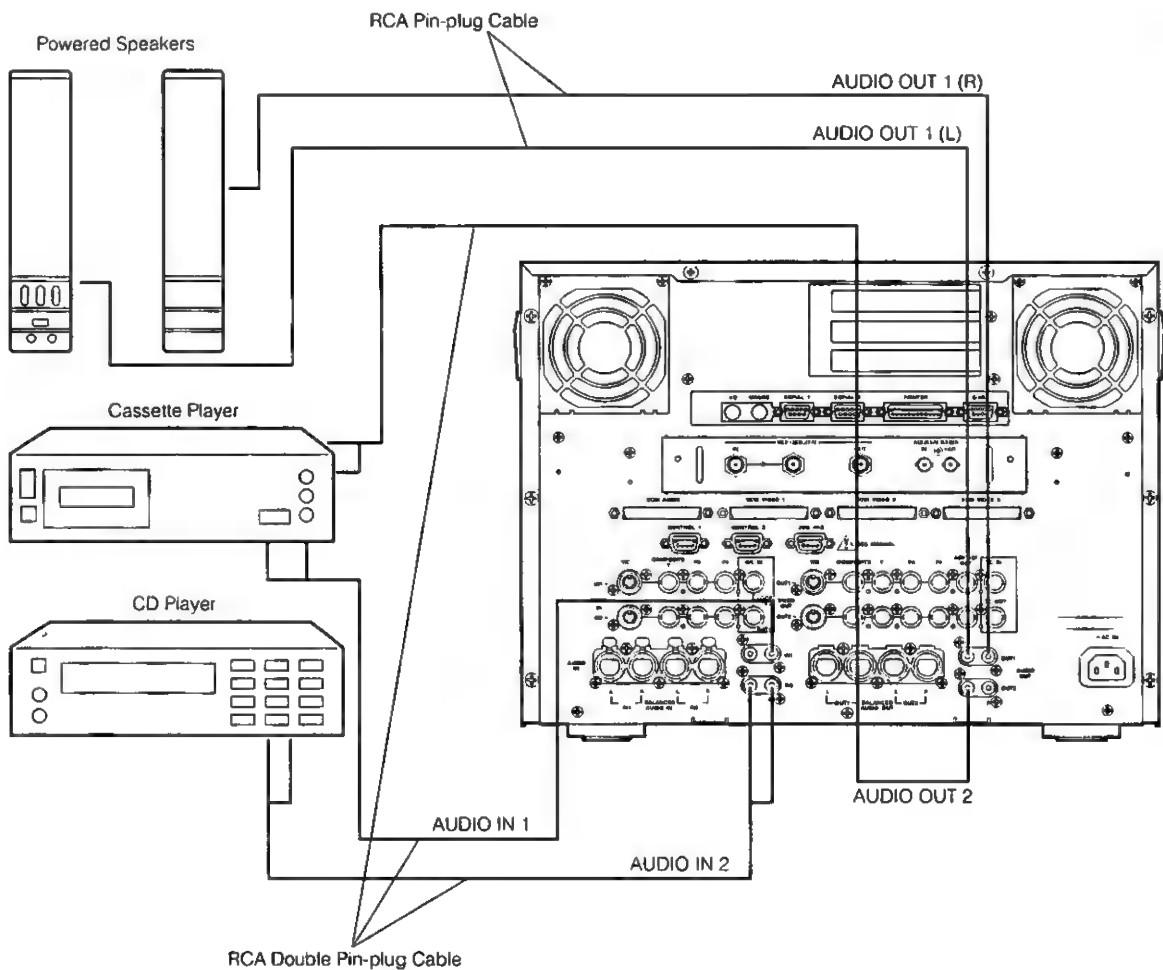
■ Power On

1. Turn on the power of the HDD-BOX and all peripheral equipment in the system.
   The power indicator of the HDD-BOX lights red.

2. Turn on the power of this unit.
   The Power Indicator of this unit lights and the system is activated.

Power Indicator/HDD Indicator

Power On/Off Switch
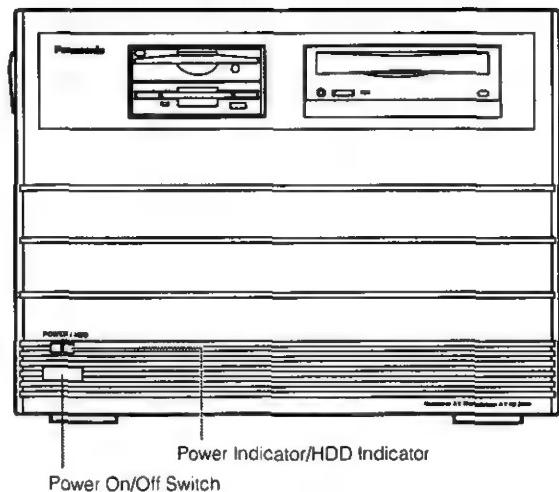
■ Power Off

Caution:
Be sure to turn off the power of this unit only after the nonlinear AV workstation software is closed.
Otherwise, the data on the HD or HDD unit may be corrupted.

1. Quit the software and Windows.
   Refer to the User's Manual of the AY-AS2000 (application software) for details.

2. Turn off the power of the peripheral equipment.

3. Turn off the power of this unit.

Refer to the User's Manual or Reference Manual for more details.

■ Starting the System

1. Turn on the power of the peripheral equipment in the system.
2. Then turn on the Main Unit.
   The system starts and the initial window (Tool Box, Bin Manager or Bin Window) appears on the Computer Display.

Computer Display is shown below.

Tool Box

Special Button

Bin Manager   Bin Window
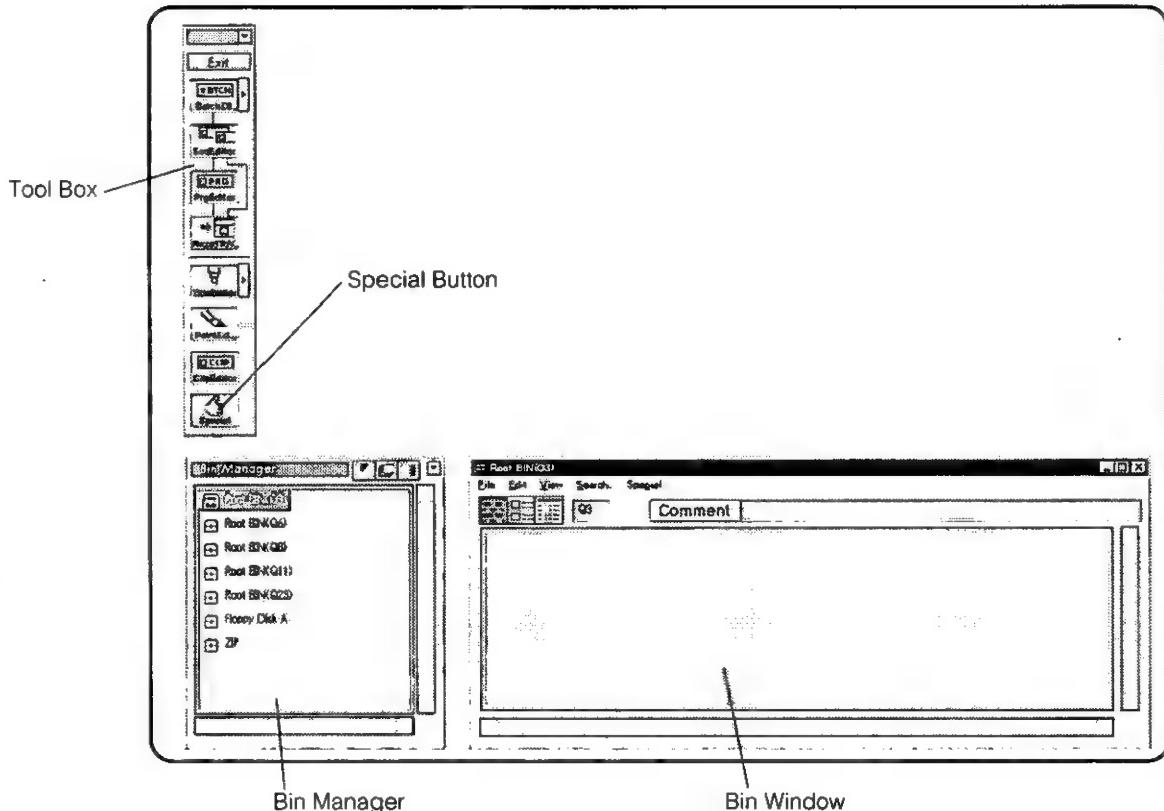
■ Closing the System

1. Click "Exit" on the Tool Box.
2. Click "OK".

3. Turn off the power of the peripheral equipment in the system and then the Main Unit.

■ Installing the Software Package

You should install the application program (provided on CD-ROM with the AY-AS2000) into the Main Unit to operate this system.
Confirm the connection to the HDD-BOX before installing the software package. If the connection is incorrect, error or startup troubles may occur.

Note: Back-up Windows 95 before the installing the application program and font.

Install an Application Program

1. Turn on the peripheral equipment of the system.

2. Then turn on the Main Unit.
   Windows 95 starts up.

3. Click "START".
   The Pull Down menu is displayed.

4. Click "RUN....".

5. Insert the CD-ROM into the CD-ROM Drive.

6. Type "G:\AS2000\DISK1\SETUP" from the keyboard and click "OK".
   The initial setup window appears.

7. Click "Continue".
   The input screen appears.

8. Click "Continue".
   Then type your name, company and the serial number of the main unit from the keyboard.

9. Click "Continue".
   The Locale dialog panel is displayed.

10. Select "NTSC [English]" and click "Continue".
    The Hardware dialog panel is displayed.
    Click "WJ-HX1000/AY-NE2000 Series".

11. Click "Continue".
    The startup dialog panel is displayed.
    Click "Yes".

12. Click "Continue".
    The confirmation dialog panel is displayed.
    Check the all description, and click "Install".

## ■ Upgrade for JOG Microprocessor Program

1. The first time you startup the computer after installing, following message may be displayed.

   "Program version built in JOG microprocessor is different from system required. The program will be rewritten."

   In this case, click "OK". JOG microprocessor program (built-in flash memory) will be rewritten automatically.

2. While rewriting, following panel and message will be displayed. DO NOT turn off, or reset the computer while rewriting.

   "Preparing for writing new program."

	33%	
Writing Data	**16220 byte**	**/ 49152 byte**
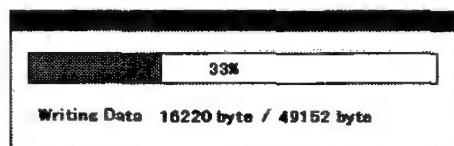
3. When rewriting is finished correctly,
   "Writing new program succeeded!"
   will be displayed. Click "OK".

4. When rewriting is finished incorrectly,

   "An error is occurred while writing. Restart the system after turn off the power. Toolbox will be finished."

   will be displayed.
   Click "OK" and turn off the computer. The next time startup the computer, a message will be displayed which inform you of automatically rewriting the JOG microprocessor program.

Note: In case you turn off or reset the computer while rewriting, the same message will be displayed. If the JOG microprocessor program data can not be restored, please contact to the nearest Panasonic dealer.

■ Installing Fonts

1. Turn on the Main Unit.
   The application program starts up.

2. Double click "Special" in the Tool Box.
   The Setup panel appears.

3. Click "Font" on the Setup panel.
   Click "Append All" and combine the necessary fonts with the application program.

■ Device Setting

Refer to the Reference Manual of AY-AS2000 for more details.

1. Double click "Special" in the Tool Box.
2. Double click "Device" in the Setup Panel.
   The "VCR SETUP" window is displayed.

Device Setup Window
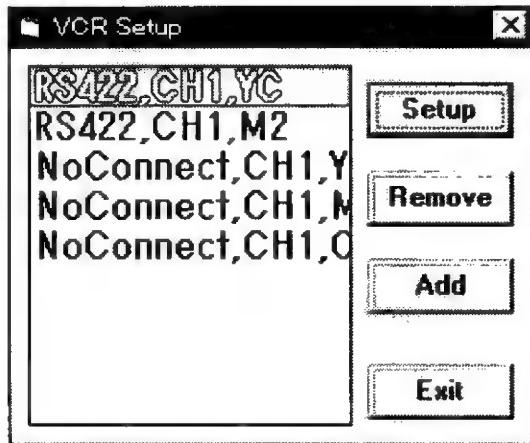
3. Click "Add" in the Device Window.
   The "Connection Setup" panel is displayed.

Connection Setup Panel
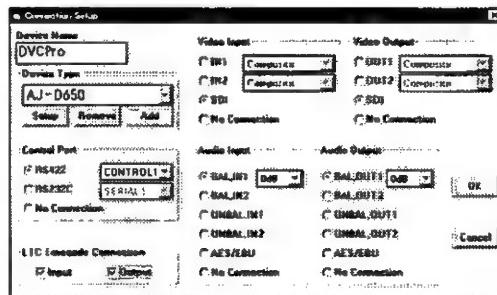
4. Set the necessary items.

5. In case that there is not VCR name that you use, in the Device Type area, click "Add".
   The "Attribute Setup" panel is displayed.

Attribute Setup Panel
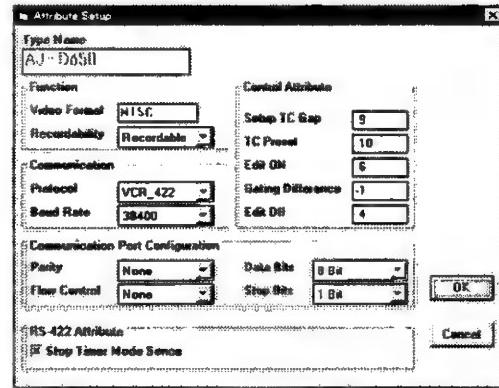
6. Set Function, Communication and Control Attributes.

■ Operation Confirmation

Refer to the Reference Manual for the AVHDD Maintenance tools.

1. Double click "Special" in the Tool Box.
   "Setup Panel" is displayed.
2. Double click "AV HDD" to display the "AV HDD Maintenance tool" panel.
3. Click "disk configuration" to display the "Disk Configuration" panel.

DISK Configuration Panel
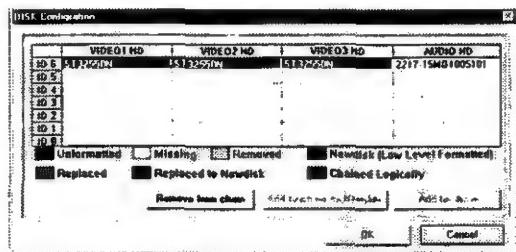
4..The HDD model numbers are displayed in the "Disk Configuration" panel.

Note: All HDD model numbers should be displayed in blue.

No Display
- Confirm the SCSI cable connection between the HDD-Box and main unit.
- If no problem is found with the connection, refer to qualified service personnel.

Black Display
- Initialization of the HDD displayed in black (in the "Disk Configuration" panel) is not possible.
  In this case, refer to qualified service personnel.

Red Display
- Click on "Add to chain as Newdisk" for logical formatting.

Caution:
- It is important to make a back-up copy of HDDs, and Windows 95. Backing up your files and disks ensures that you won't lose information if the original is lost or damaged.
- For backing up, 30 floppy disks are required.

■ Back-up of Windows 95

1. Format 29 floppy disks.
2. Click [EXIT], then click [Restart Windows].
3. Click [Start] and select [Programs] → [Accessories] → [System Tools Create System Disks].
4. Insert the floppy disk into the Floppy Disk Drive according to the message.
5. Write WIN-0,1...28 on the labels of the backed-up floppy disks.

Caution:
Only 1 set of back-up disks can be made.

■ Reloading Windows

1. Keep the 29 Windows 95 back-up disks ready.
2. Insert the [WIN-0] floppy disk into the FDD, and turn the main power on.
3. Reload the floppy disks from [WIN-0] to [WIN-28].

● Gen-lock Adjustment

Phase adjustments must be performed by using the switches inside the Front Panel when external synchronizing signals are supplied to the system.

For the example, the gen-lock adjustment is shown below using a two-channel oscilloscope (or wave form monitor), vector scope and signal generator.

1. Connect the oscilloscope, vector scope and signal generator with the Main unit AY-NE2000.
   The reference signal is supplied from the signal generator.
   The video signal should be a composite signal.
2. Turn on the external reference switch of the vector scope.
3. Remove the Front Panel by releasing 4 screws.

AY-NE2000

Video Signal — VIDEO IN

G/L IN

VIDEO OUT (COMPOSITE)

CH2   CH2

EXT SW ON   EXT

EXT

75Ω

Signal Generator

Video Monitor

Screws

Screws

VR1	SW1	SW2	SW3	VR2
Sub-Carrier Fine Control	Sub-Carrier Control	Horizontal Phase Control		Horizontal Phase Fine Control
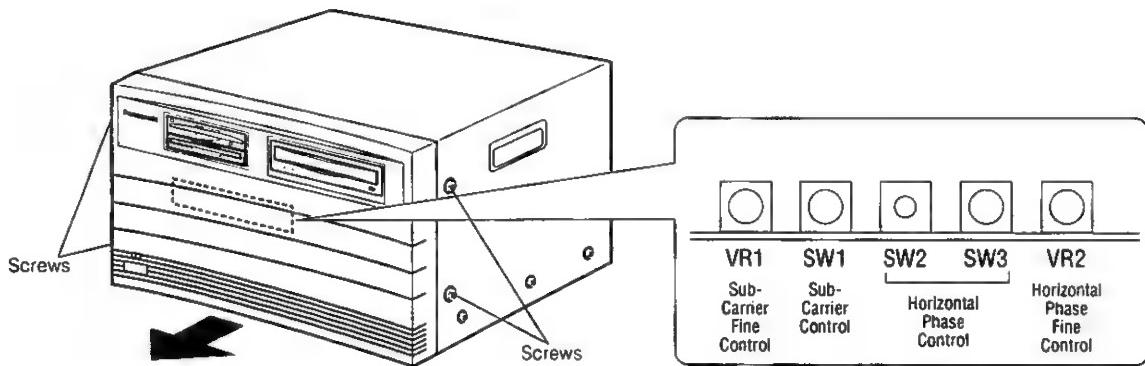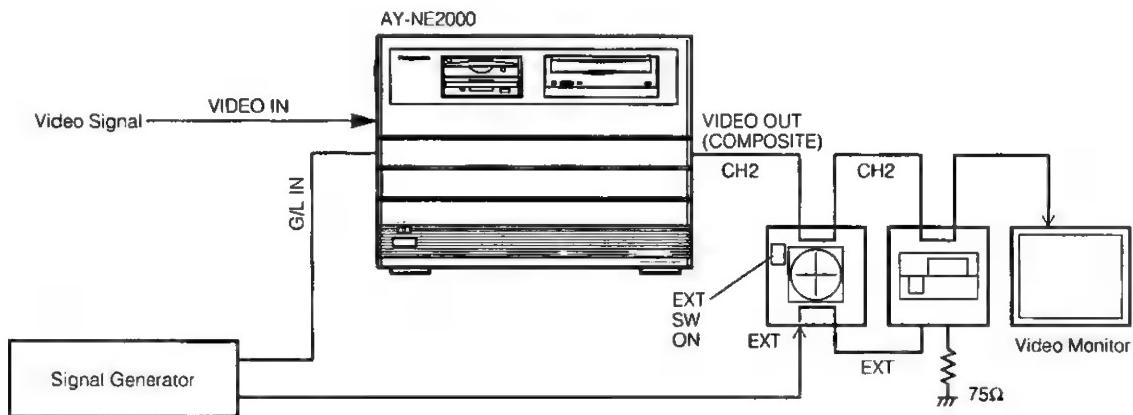
● Color Phase Control

The sub-carrier can be adjusted by using the SW1 and VR1.

1. Turn the SW1 to clockwise; 0°, 90°, 180°, 270°
   Turn the SW1 to counterclockwise;
                                270°, 180°, 90°, 0°
2. Perform the fine adjustment with the VR1.


VIDEO OUT

Reference signal

● Horizontal Phase Control

Observe the waveform of the external synchronizing input signal (black burst signal) and video output signal on a two-channel oscilloscope.
Then match the horizontal phase of both signals by using the SW2, SW3 and VR2.

1. The horizontal phase course 1 adjustment can be performed with the SW3 (1 µs).
2. The horizontal phase course 2 adjustment can be performed with the SW2. (70 ns).
3. The horizontal phase fine adjustment can be performed with the VR2.

Reference signal

VIDEO OUT

● Install the Front Panel

After the above adjustments, install the front panel as shown below.

Screws   Front Panel   Unit

Screws
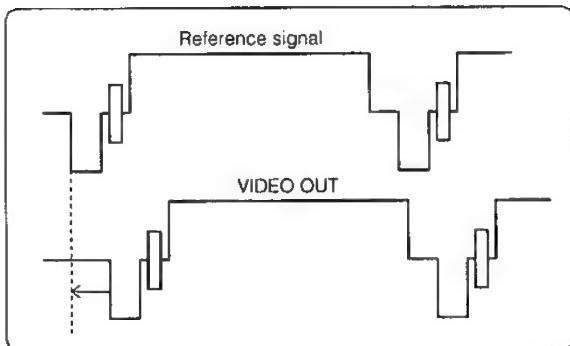
Slot   Protrusion

1. Place the panel as shown above figure.
   Insert the slot on the panel to the protrusion.

2. Press the panel to the front of the Main Unit.

3. Confirm the Front Panel is tightened firmly.

4. Tighten 4 screws.

The system memory should be as follows:

Type	168-pin DIMM type
Memory Type	SDRAM
Memory Capacity	32MB, 64MB, 128MB
Power Voltage	3.3V
Operation Speed	More than 100MHz
ECC	Not required
SPC	Not required

The momery should be arranged as follows:

(1) Factory Setup

DIMM1	32MB
DIMM2	no used
DIMM3	no used
Total	32MB

(2) Add 32MB Memory

DIMM1	32MB	32MB
DIMM2	32MB	32MB
DIMM3	no used	32MB
Total	64MB	96MB

(3) Add 64MB Memory

DIMM1	no used	no used
DIMM2	64MB	64MB
DIMM3	no used	64MB
Total	64MB	128MB

(4) Add 128MB Memory

DIMM1	no used	no used
DIMM2	128MB	128MB
DIMM3	no used	128MB
Total	128MB	256MB
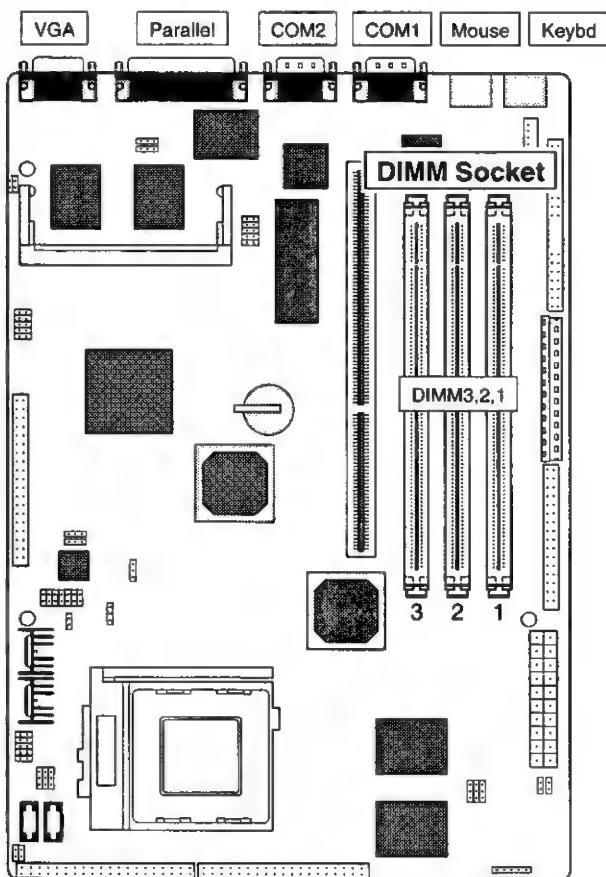
Video

Video Input
[Analog]
Input Connectors: 2 sources (selectable from Composite. Y/C, Y/Pв/Pн)
Composite: 1.0 V[p-p]/75 Ω (BNC)
Y /C: Y: 1.0V[p-p]/75 Ω
                                 C: 0.286 V[p-p]/75 Ω (Y/C terminal)
Component: Y: 1.0V[p-p]/75 Ω (BNC)
                                 Pв/Pн: 0.486V[p-p] or 0.7V[p-p],
                                        75 Ω (BNC) (Setup 7.5 IRE)

[SDI (Option)]
SMPTE259M 75 Ω (BNC) with active loop-through

Video Output
[Analog]
Output Connector: 2 outputs (simultaneously from Composite, Y/C, Y/Pв/Pн)
Composite: 1.0V[p-p]/75 Ω
Y/C: Y: 1.0V[p-p]/75 Ω
                                 C: 0.286V[p-p]/75 Ω (Y/C terminal)
Component: Y: 1.0V[p-p]/75 Ω (BNC)
                                 Pв/Pн: 0.486V[p-p] or 0.7V[p-p], 75 Ω (BNC) (Setup 7.5 IRE)

[SDI (Option)]
SMPTE259M 75 Ω (BNC)

Synchronization
Gen-Lock Input: 1.0V[p-p]/75 Ω (BNC), with loop-through output (x1)
ADV.REF output: Sync: 0.286V[p-p], 75 Ω
                                 Burst: 0.286V[p-p], 75 Ω

Audio Input
[Analog]
Selectable from 4 sources
Source 1/2:   +4dBu, 0dBu, –20dBu selectable, 600 Ω balanced (3-pin XLR connector)
Source 3/4:   –6dBs, 20 kΩ, unbalanced (RCA pin jack)
[AES/EBU (Option)]
SMPTE279M 75Ω (BNC)

Audio Output
[Analog]
4 outputs (simultaneous)
Ch. 1/2:   +4dBu, 0dBu, –20dBu selectable, 47 Ω balanced (3-pin XLR connector)
Ch. 3/4:   –6dBs, 75 Ω, unbalanced (RCA pin jack)
[AES/EBU (Option)]
SMPTE279M 75Ω (BNC)

Other Inputs/Outputs

LTC time code Input:	x1 (BNC)
LTC time code output:	x1 (BNC)
SCSI connector:	x4 (Audio, Video 1, Video 2, Video 3, SCSI-2 standard, 68-pin half pitch connector, pin type)
VCR control connector:	RS-422, 9 pin x2 (D-sub)
Jog Pad connector:	9 pin x1 (D-sub)

PC

CPU:	Pentium Processor, MMX 200 MHz
OS:	Windows 95
Main Memory:	32MB DIMM 168-pin SDRAM
Built-in Hard Disk Drive:	3.2GB (E-IDE) x1
Floppy Disk Drive:	1.44MB x1
ZIP Drive:	100MB x1
CD-ROM Drive:	x32 Speed
Card Slot:	PCI x3 (supplied by Panasonic only)
SVGA connector:	15 pinx1 (D-Shell, female), 1024x768 dots, 256 colors, Scanning: 48kHz (horizontal), 60 Hz (vertical)
Parallel connector:	25 pin x1 (D-Shell, female)
Serial connector:	9 pin x2 (D-Shell, male)
Mouse:	6 pin x1 (Mini-Din, female)
Keyboard:	6 pin x1 (MIni-Din, female)

Video Performance

S/N Ratio*:	55dB ($Y/P_B/P_R$), 53dB (Y/C), 50dB (Composite)
DG, DP*:	5%, 3°
Frequency Response*:	4.5MHz, +0dB, –3dB (Y/C, $Y/P_B/P_R$)
Sampling Frequency:	13.5MHz, 4:2:2, 8 bit component
Y/C Separation:	3 lines, digital logical comb filter
SC-H:	±30°
Compression:	MOTION JPEG
Compression Quality:	Q3, Q6, Q8, Q11, Q23
Recording Time:	Approx. 3 min/GB (Q3)
	Approx. 6 min/GB (Q6)
	Approx. 7 min/GB (Q8)
	Approx. 10 min/GB (Q11)
	Approx. 16 min/GB (Q23)

Title Graphics

Resolution:	640 x 480 dots Y, U, V, α, 8 bit component each
Font :	True type

Audio Performance

S/N Ratio: More than 67dB (1kHz, XLR OUT)
Dynamic Range: More than 85dB
Total Harmonic Distortion: 0.05% (1kHz)
Frequency Response: 20kHz, +0, −3dB, 20Hz, +0, −3dB
Sampling Frequency: 48kHz, 16 bit
Mixing: Stereo 4 channels
Effector: EQ, Reverberation
Recording Time: Approx. 67min/GB

Others

EDL Output: CMX 3600, CMX340, GVG, BVE9000, AU-A950 Format
Graphic Conversion: TIFF, JPEG, TARGA, BMP, WMF, PCT

General

Power Supply: 120V AC, 60Hz
Power Consumption: 140W (with optional Video Board)
Ambient Operating Temperature: 0°C - 35°C (32°F - 95°F)
Ambient Operating Humidity: 10% - 90%
Weight: Main unit: 27.0 kg (59.5 lbs)
     Jog pad: 1.2 kg (2.6 lbs)

Dimensions:
     Main unit (W x H x D):   420 x 319 x 461 mm (16$9/16$" x 12$9/16$" x 18$1/8$")
     Jog pad (W x H x D):   340 x 45 x 193 mm (13$3/8$" x 1$3/4$" x 7$5/8$")

Weight and dimensions indicated above are approximate.
Specifications are subject to change without notice.
This product might be subject, to export control regulations.

* : Without Compression

Memo

Memo